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	Filing Date	June 1, 2000	
	First Named Inventor	Samuel M.D. NORVILLE	
	Group Art Unit	1725	
	Examiner Name	Kuang Y. Lin	
Total Number of Pages in this Submission	9	Attorney Docket Number	9105-3

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input checked="" type="checkbox"/> Appeal Communication to Board of Appeals and Interferences - Reply Brief to the Examiner's Answer
<input type="checkbox"/> Amendment Response	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> To Convert a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address	<input type="checkbox"/> Status Letter
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<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual Name	James M. Durlacher Woodard, Emhardt, Moriarty, McNett & Henry LLP
Signature	<i>James M. Durlacher</i>
Date	March 22, 2004

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Typed or printed name	James M. Durlacher, Reg. No. 28,840		
Signature	<i>James M. Durlacher</i>	Date	March 22, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of:)
) Before the Examiner
Samuel M.D. NORVILLE, et al.)
) Kuang Y. Lin
Serial No. 09/585,061)
) Group Art Unit 1725
Filed June 1, 2000)
) March 22, 2004
Apparatus For and Method of)
Producing On-Demand Semi-)
Solid Material for Castings)

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March 22, 2004

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James M. Durlacher

Name of Registered Representative

James M. Durlacher
Signature

March 22, 2004

Date of Signature

**SUBMISSION OF REPLY BRIEF
TO THE EXAMINER'S ANSWER**

Board of Patent Appeals and Interferences
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith is Applicants' Reply Brief to the Examiner's Answer, in triplicate.

No extensions of time are believed to be required and no additional fees are believed due. However, the Board is authorized to provide any additional extensions of time and charge any additional fees which are required to Deposit Account No. 23-3030.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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In re patent application of:)
Samuel M.D. NORVILLE, et al.) Before the Examiner
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March 22, 2004

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James M. Durlacher

Name of Registered Representative

James M. Durlacher
Signature

March 22, 2004

Date of Signature

REPLY BRIEF TO THE EXAMINER'S ANSWER

Board of Patent Appeals and Interferences
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

I. INTRODUCTION

Applicants' position regarding the rejections set forth in the Final Office Action dated May 7, 2003 is stated in the Appeal Brief filed August 7, 2003. The Examiner's Response to Argument, section (11) of the Examiner's Answer, does not reveal any change in position regarding claims 1-19, 24-26, and 31-38 (the claims appealed). However, some of the statements by the Examiner in his Response to Argument are significant in terms of what they reveal regarding the Examiner's thought process, his analysis of the claims, and his interpretation of the cited references. This Reply Brief focuses on these issues.

II. THE “SLURRY BILLET” ISSUE

This issue is important since each independent claim, now pending and on appeal, recites a “slurry billet”. Once that phrase is properly defined by the United States Patent and Trademark Office, it will be quite clear that the lone prior reference, Brauer et al., does not anticipate nor render obvious this claim element.

The Examiner has consistently refused to accept Applicants’ definition of a “slurry billet” as set forth in the application, see page 1 of the ‘061 application, and pages 20 and 21 of the Appeal Brief. Not only can the Applicant be his or own lexicographer, but in this case the assigned definition to the selected terms is totally consistent with dictionary definitions and with the custom and usage in the industry.

While it is believed to be sufficient for Applicants to be their own lexicographer in terms of selecting the phrase “slurry billet” and defining what that phrase means in the context of the application, there are other sources that may facilitate both an understanding of this phrase and an acceptance of Applicants’ position with regard to this issue. For example, it should be noted that typical dictionary definitions for the term “billet” in the metal working arts support Applicants’ position that this term defines a discrete component, not a continuous (non-discrete) flow of slurry. Additionally, there are over 1400 patents that use the term “billet” (according to the Delphion database) and, of those patents that were reviewed, the usage of this term is consistent with Applicants’ usage as set forth and as defined in the ‘061 patent application. As one example of consistent usage within the industry and in other issued patents, the Board’s attention is directed to U.S. Patent No. 6,098,700 that describes an apparatus for die casting that

involves a “metal matrix composite billet”. This billet is identified by reference numeral 1 in the ‘700 patent and is illustrated as being a small cylindrical slug of material in the form of a discrete, single shot mass. A copy of the ‘700 patent is included as Exhibit A to this Reply Brief.

The Examiner continues to assert that Brauer et al. creates and processes a “slurry billet”. As stated in the May 7, 2003 Final Office Action, referring specifically to page 5, paragraph c, “the slurry exited from the opening (66) is considered to be a ‘slurry billet’.” This position by the Examiner is clearly and completely inconsistent with Applicants’ stated definition of “slurry billet” as found in the ‘601 patent application. This position by the Examiner is inconsistent with most dictionary definitions and it is inconsistent with the typical usage of this term in the trade and in other issued patents.

In an attempt to try and support his contention regarding what constitutes a “slurry billet”, the Examiner refers to page 13, lines 11-19, and to FIG. 2 of the specification of the ‘061 patent application. The Examiner contends that whether the semi-solid material is called slurry or slurry billet, this is nothing more than a personal preference. Once again, this ignores the definition provided in the ‘061 patent application. It may be the Examiner’s “personal preference” as far as terminology, but that does not mean that it is anyone else’s “personal preference”. It is obviously not the Applicants’ “personal preference”. The transparency of this contention by the Examiner is brought to light when it is recognized that the description of the FIG. 2 arrangement does not use the phrase “slurry billet”. In fact, this portion of the specification describes the semi-solid material as being discharged through “pour” hole 48. Even if this

embodiment of the present invention has similarities to the pour hole (66) of Brauer et al., patent application claims are not required to read on every disclosed embodiment and arrangement. Very clearly, the phrase “slurry billet” is supported by other embodiments and arrangements in the ‘061 patent application, as set forth on pages 18-21 and again on pages 23-27. These portions of the specification refer repeatedly to “slurry billet” while the FIG. 2 arrangement does not. These portions of the specification and their corresponding drawing figures are totally consistent with the pending claims and with the definition of “slurry billet”, as set forth by Applicants and as argued in this Appeal.

III. THE CITATION OF PRIOR ART ISSUE

The Examiner has repeatedly made sweeping generalizations of what would be obvious to a person of ordinary skill in the art. For many months, there was either a reluctance or refusal to provide any corresponding citation for the obviousness contentions being asserted. While a limited group of references were finally cited as part of the Final Office Action dated May 7, 2003 (see paragraph g), they did not address all of the claim elements the Examiner had rejected based on obviousness.

While admittedly certain claim elements may be so commonplace and widely used that nothing more is needed in terms of prior art to support an obviousness rejection, that is not the case here. The underlying technology of the ‘061 patent application is complex and sophisticated. It is therefore inappropriate and unfair to reject substantive and important claim elements with an otherwise unsupported one liner, simply saying

that it is obvious. Something more in terms of an applicable prior art reference is required.

As the Board can readily determine, the pending dependent claims and, to some extent, portions of the independent claims recite structural elements and relationships that the Examiner contends are obvious. Some of these elements include the critical cycle times, the cooling arrangement, the use of a thermal jacket, and the manner in which the thermal jacket is assembled into the stator around the vessel. None of these claim elements have yet received any citation of prior art from the Examiner as part of the Final Office Action. Granted, the Examiner did cite prior art for the robotic arm element, the multiple phase, multiple pole stator element, and the adding of particulate element, but nothing else. The fact that the Examiner ultimately cited some prior art for some claim elements should be seen as an acknowledgment or an admission that this is required for a proper rejection based on obviousness. This should also be seen as an admission that the Examiner does not have any prior art for all of the other elements that received the (unsupported) obviousness rejection.

IV. CONCLUSION

Claims 1-19, 24-26, and 31-38 are not anticipated nor rendered obvious by Brauer et al. in that Brauer et al. does not disclose a “slurry billet” as that phrase must be interpreted for a proper understanding of the claims. The Examiner disagrees, suggesting that terms such as “slurry” and “slurry billet” are the same and differ only with regard to

personal preference. This position completely ignores Applicants' definition of the term "billet". The Examiner should be reminded that he does not have discretion to simply ignore claim terms that help distinguish the claimed invention from the prior art. The Examiner has not produced any document, citation, or accepted definition that would support his position regarding the "slurry billet". To the contrary, Applicants have defined "slurry billet" for purposes of the '061 application. This is powerful evidence and it is controlling with regard to how the claims should be interpreted. Even if Applicants had not defined their terms, normal dictionary definitions and industry usage would have been available to define the meaning and scope for this phrase. These alternate sources fully support Applicants' position.

Many of the dependent claim elements, such as cycle times, cooling arrangements, and the use of a thermal jacket, have been subjectively ruled as being obvious without any citation to support that subjective contention. As Applicants' attorney has previously stated to the Examiner, if in fact these elements are as obvious as the Examiner contends, then it should be a relatively simple task to bring forth one or more prior art references that disclose these particular features and make these features obvious. The Examiner has not done this.

It is clear that all pending claims now under appeal should be allowed and such favorable action by the Board is respectfully requested.

Respectfully submitted,

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